

2005 Competition Rules for the National Science Bowl®

Eligibility Rules

1. Each competing team consists of four student members and may also include one student alternate. To be eligible to compete, a student must be enrolled for the current school year in grades nine, ten, eleven, or twelve at the team's school, and be less than 20 years of age or receive a special waiver from the Department of Energy. Teams of home schooled students, girl scouts, boy scouts, and science clubs are welcome to participate.
2. No school or student group may compete in more than one regional competition. ***No student may compete on more than one team.*** Each regional coordinator will determine whether more than one team from a high school will be allowed to participate in their regional as well as the geographic area their regional will encompass. No more than three teams from one high school or student group may compete in a regional event.
3. To be eligible for the National Science Bowl® finals, a student must have competed on the team that won the Regional Science Bowl or the second place team in the event that the first place team declines to attend.
4. The winning team from each regional tournament is **invited** to participate at the National finals April 28 – May 2, 2005. By **March 11, 2005**, the winning team's coach is required to inform the National event coordinator of its availability to participate at the Nationals. During this time of the school year, students are participating in a variety of activities and academic events that may conflict with their participation in the National Science Bowl® (including, but not limited to, state athletic tournaments, proms, International Baccalaureate, Advanced Placement and SAT exams). In the interest of safety, continuity, and educational value, the National Science Bowl® requires students to take part in ALL of its events and activities. Therefore, no waivers will be granted or special arrangements made for students to participate in any conflicting activities or exams. If team members are involved in these pursuits, the students will need to determine which activity or event is in their best interest and make their selection by **March 11, 2005**. All teams must arrive and depart on the designated dates and be in attendance throughout the duration of the National Science Bowl® weekend. If the entire winning regional team (***at least 4 students***) is unable to participate at all activities, the second place team will be invited to replace them.

Competition Structure

5. The Nationals contest will use a round robin format for the preliminary rounds and a double elimination format for the final rounds. For the preliminary rounds at the Nationals, teams will be placed in divisions by drawing lots with the number of teams per division as equal as possible. The specific number of divisions and the number of teams in each division will depend on the number of

teams participating in the competition. Each team will play every team in its division. At the end of each game, regardless of the overall score, two points are awarded for a win; one point for a tie; and zero points for a loss. There will be no tie-break questions during the round robin matches.

6. The top “x” teams in each division will advance to the double elimination format final rounds. The number of teams from each division advancing will be determined after the total number of teams participating is known. The double elimination will include approximately sixteen teams based on the number of divisions in the preliminary round. Preliminary rounds ONLY determine eligibility for the final rounds, not position in the draw.
7. The final portion of the Nationals contest will use a double elimination format. No advancing team is eliminated from this segment of the competition until it has lost two matches. Drawing lots, regardless of where the team finished in its division, will determine first round opponents for the final rounds. After this, a competition flow chart will be followed to determine opposing teams.
8. Regional competitions have the option of choosing their tournament style, e.g., only double elimination, only round robin, or a combination of both. However, it is strongly recommended that both a round robin and a double elimination segment be included since the Nationals will have both.

Rules of the Game

9. Two types of questions will be used: toss-up and bonus questions. A toss-up question, which may be answered by any member of either team that is playing, must be answered correctly in order for a team to be offered a bonus question. No consultation is allowed on toss-up questions.
10. No team will have more than one opportunity to answer a toss-up question.
11. Questions are either multiple-choice or short answer. The only acceptable answer to a multiple-choice question will be one of those read by the moderator.
12. Once read in its entirety, a question will not be re-read.
13. On toss-up questions, the first player on either team to activate the lock-out buzzer system wins the right to answer the question except that no player may buzz in until AFTER the moderator has identified the subject area of the question.
14. Before answering the questions, the team member must be verbally recognized by the moderator *or scientific judge*. (*Before the match, this person will be identified.*) If not so recognized, their response is treated as a non-answer and the moderator will not indicate whether the answer was right or wrong.
15. On toss-up questions, no consultation among team members may occur.

16. Should a player answer a toss-up question before being verbally recognized or should consultation among any of the team members occur, any answer given does not count (the moderator does not say whether the answer given was correct or incorrect) and the team loses the right to answer the toss-up question. The question is then offered to the opposing team.
17. On a toss-up question, the first answer given is the only one that counts. However, if a participant gives both a letter answer and a scientific answer, both parts must be correct.
18. If the answer to a toss-up question is wrong and the question was completely read, the other team is given the opportunity to answer the toss-up question, unless time expires before the second team has buzzed in. The second team is allowed a full 5 seconds to buzz in after the first team has answered incorrectly or has answered without being recognized, unless time expires.
19. The answer to the bonus question must come from the team's captain including when the question has been interrupted. Moderators should ignore an answer from anyone but the captain on the bonus question.

Timing Rules

20. The match is played until either the time expires or all the toss-up questions have been read. Regional competitions will have two 8-minute halves with a 2-minute break (halves at the Nationals are 10 minutes). Each half begins with a toss-up question.
21. After reading a toss-up question, the moderator will allow 5 seconds for the two teams to respond before proceeding to the next toss-up question. Timing begins after the moderator has completed reading the toss-up question.
22. A participant who has buzzed in on a toss-up question must answer the question promptly after being verbally recognized by the moderator *or scientific judge*. After recognizing a participant, the moderator will allow for a natural pause (up to 3 seconds), but if the moderator determines that stalling occurred, the team loses its opportunity to answer the question and it is offered to the opposing team if eligible.
23. After a team member has answered a toss-up question correctly, the team is given the opportunity to answer a bonus question. The team will have 20 seconds to begin to give its answer to the bonus question. Consultation among team members is allowed on bonus questions.

24. On a bonus question, the signal, "5 SECONDS" will be given by the timekeeper after 15 seconds of the allowed 20 seconds have expired. Additionally, the timekeeper will indicate the end of the 20-second bonus period by saying, "TIME." If the team captain has not begun the response before the timekeeper calls, "TIME", the answer does not count. If the team captain has begun the response, he/she may complete the answer.

Scoring

25. Toss-up questions are worth 4 points, and bonus questions are worth 10 points.
26. If a toss-up question is interrupted, the player recognized, and the answer correct, the team will receive 4 points. If the answer is incorrect, 4 points are added to the opposing team's score, the question is reread in its entirety, and the opposing team has an opportunity to answer the toss-up question with the chance to answer the bonus question if correct.
27. The double interrupt: If a toss-up question is interrupted, the player is recognized, and the answer is incorrect, 4 points are added to the opposing team's score. The question is then reread in its entirety. However, if a student on the opposing team interrupts the re-reading of the question, the player is verbally recognized and gives an incorrect answer, 4 points are added to the other team's score. The moderator will give the correct answer and move on to the next toss-up question.
28. If the moderator inadvertently gives an answer to a toss-up question without giving either team a chance to respond, no points are awarded and the moderator goes on to the next toss-up question.
29. If a toss-up question is interrupted, the player is NOT recognized and blurts out an answer, the result is a non-answer. No penalty points are awarded to the opposing team. The moderator will not indicate whether the answer was right or wrong and the question is reread in its entirety to the opposing team.
30. If the moderator inadvertently gives the answer to a toss-up question before allowing the second team to respond (after an incorrect answer, or an answer given without the team member having been recognized), the next toss-up question will be read to the second team in place of the inadvertently answered question.

Summary of Scoring:

Type of Question	Points Awarded
Toss-up	+4 points, & eligible for bonus
Bonus	+10 points
Incorrectly Answered Interrupted Toss-up	+4 points to opposing team
Unrecognized Interrupted Toss-up or Unrecognized Toss-up	+0 points

Challenges

31. Challenges must be made before the moderator begins the next question. All challenges must come from the team members who are actively competing. The alternate and/or the coach may not object verbally or by signal. If either the alternate or the coach objects verbally or by signal to the active team members, the challenge will not be allowed. All decisions of the judges are final.
32. Should a question or challenge arise during a competition, the competition and the clock will be stopped until the question is resolved. Once the question has been resolved, the match will continue from that point. Should the moderator decide that some time was lost due to the interruption, the moderator has the right to put the appropriate amount of time back on the clock.

When Time Runs Out

If time runs out in the contest or half, the following rules apply:

The question has been read completely –

33. If the question has been completely read, but neither team has buzzed in, the game or half is over.
34. If the question has been completely read, a player has buzzed in and is recognized before answering, and gives a correct answer, the team gets to answer the bonus question. The half or game is then over.
35. If the question has been completely read, a player has buzzed in and is recognized before answering, but gives the wrong answer or answers before being verbally recognized, the game or half is over.

36. If the question has been completely read, a player has buzzed in, and time is called before the player has been recognized, the moderator *or scientific judge* will verbally recognize the player. If the player gives a correct answer the team gets to answer the bonus question. If an incorrect answer is given or the player answers before being verbally recognized, the game or half is over.

The question has NOT been read completely before time runs out –

37. If the question has not been completely read by the moderator and neither team has buzzed in (interrupted), the game or half is over.
38. If a team member buzzes in before time is called, interrupting the reading of the question, is verbally recognized and answers the question correctly, the team gets to answer the bonus question. The half or game is then over.
39. If a team member buzzes in before time is called, interrupting the reading of the question, and is verbally recognized but answers the question incorrectly, penalty points are awarded, the question is reread for the other team, which is then given the chance to answer both it and, if correct, the bonus before the contest or half is over.
40. If a team member buzzes in before time is called, is not verbally recognized, and blurts out the answer, the answer is not accepted but no penalty points are awarded. The question is read in its entirety for the other team which, if it answers correctly, also is given a chance to answer the bonus question before the contest or half ends.

Rules for the End of Round Robin or Double Elimination

41. In the event that the required number of teams from each division is not clearly identifiable (resolution is necessary only between teams tied for last position[s]), a tie-break procedure in the following order will be used:
- (i) Head to head won/loss record
 - (ii) Fewest losses
 - (iii) If two (2) teams are still tied, there will be a five toss-up question run-off (interrupt penalty in effect). No bonus questions will be used during this segment of the competition. If still tied, another five toss-up question run-off will be used, etc. until the advancing team is determined.
 - (iv) If more than two teams are tied, each team, in separate rooms, will be given a series of ten toss-up questions (no bonus questions will be used during this segment of the competition). The usual five (5) seconds will be allowed for a competitor to buzz in after the

question is completely read. There are no interrupt penalties but also no reason to interrupt since all ten questions will be read. Scoring will be based on the number of questions right minus the number wrong. If two or more teams are still tied, procedure (iii) or (iv), as appropriate, will be used until the advancing teams are determined.

42. If the score is tied (in the double elimination phase only) at the end of the regulation time period, a series of five toss-up questions will be used to break the tie. Interrupt penalties are in effect. Round robin matches may end in a tie as explained in rule 5 above.

Miscellaneous Rules

43. Substitutions may be made only at the half.
44. No one in the audience may communicate with participants during the match; communication will result in ejection from the competition room.
45. If someone in the audience shouts out an answer, the question will be thrown out (as will the person) and the moderator will proceed to the next question.
46. Prior to each match, the two team coaches will introduce themselves to each other and will sit together in the back row of the competition room.
47. No notes may be brought to the competition table. Nothing may be written before the clock starts. Scratch paper will be provided at the beginning of each match and collected at half-time and at the conclusion of the match.
48. Calculators are not permitted.
49. Members of the audience, including the coaches, will not write down the questions/answers the moderator reads or use any electronic recording or transmitting device, including digital cameras during the match. At the Nationals, coaches will be provided with a team scoresheet to track the number of questions answered by each individual student on their team. No one else in the competition room is permitted to make notes of any kind during the active competition. If this occurs, the individual(s) will be asked to leave the competition room.

Model Hydrogen Fuel Cell Car Competition at the Nationals

There will be a model Hydrogen Fuel Cell Car competition at the Nationals this year. General Motors is sponsoring this activity. It is open to 16 teams, which will be selected from those who express an interest in participating, after all the regional competitions are held. These teams will have a workshop and then select the materials to build their cars. Prizes will be awarded.